(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



- LOGICE BULLOO IS OUTSIE WEN EEUN EEUN EEUN LOET HELD KEEL HELD EEUN EEUN EEUN EEUN EEU OUTSID LOET HELD GERK

(43) International Publication Date 16 December 2004 (16.12.2004)

PCT

(10) International Publication Number WO 2004/110012 A1

(51) International Patent Classification⁷: 25/02

H04L 27/26,

(21) International Application Number:

PCT/IB2004/050810

(22) International Filing Date:

1 June 2004 (01.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03101696.7

11 June 2003 (11.06.2003) E

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DE BART, Abraham, J. [NL/CN]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). DILLING, Edwin, R. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: ELEVELD, Koop, J.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

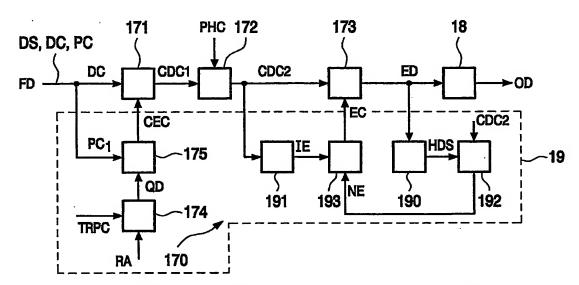
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

 as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: RECEIVER FOR MULTI-CARRIER COMMUNICATION SYSTEM



(57) Abstract: A receiver for a multi-carrier communication system receives training pilot carriers (TRPC) during a training symbol (T1, T2) which precedes data symbols (DS) which have data carriers (DC) and data pilot carriers (PC). The receiver has a correction unit (171) which supplies, under control of a control signal (CEC), a corrected signal (CDC1) which has the data carriers (DC) which are corrected for a common amplitude error and/or common phase error. A quality determination unit (174) determines which ones of the training pilot carriers (TRPC) which occur at positions of the data pilot carriers (PC) fulfill a predetermined quality criterion A control unit (175) supplies the control signal (CEC) which is dependent on an amplitude and/or phase of the data pilot carriers (PC) of which corresponding training pilot carriers (TRPC) fulfill the predetermined quality criterion, and not on the data pilot carriers (PC) of which corresponding training pilot carriers (TRPC) do not fulfill the predetermined quality criterion.



CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.